

REMARKS

By this Amendment, Applicant presents the same amendments that were presented in the previously proposed amendments set forth in the Request for Reconsideration filed November 19, 2010, with some additional remarks. The amendments set forth in the Request for Reconsideration filed November 19, 2010 were not entered. Accordingly, Applicants are filing this Amendment in reply to the Final Office Action dated September 24, 2010, along with a Request for Continued Examination under the provisions of 37 C.F.R. § 1.114. Applicant has amended claim 26 and canceled claims 18-25 and 31-55, without prejudice or disclaimer. Applicant reserves the right to pursue the subject matter of claims 18-25 and 31-55 at a later date, for example, in an application claiming priority to this application. Support for the amendments can be found in the originally filed specification, claims, and drawings. No new matter is presented. Since claims 1-17 were previously canceled, claims 26-30 are the remaining claims pending in this application.

In the Office Action, claims 26 and 28-30 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,337,733 to Bauerfeind et al. (“the Bauerfeind reference”), and claim 27 was rejected under 35 U.S.C. § 103 as obvious over the Bauerfeind reference. Of the claims rejected in view of the Bauerfeind reference, claim 26 is the sole independent claim.

Independent claim 26 is directed to a rigidizing mechanism comprising inner and outer elements and a plurality of components positioned between the inner and outer elements. Claim 26 recites, among other things, that “in a first state the components interfere between the inner and outer elements with a force sufficient to prevent the

inner and outer elements from sliding lengthwise relative to one another, and in a second state the components do not significantly interfere with the inner and outer elements sliding longitudinally relative to one another.”

In rejecting claim 26, the Examiner relies on FIGS. 1 and 4-6 and column 5, line 5 - column 7, line 33 of the Bauerfeind reference and equates inner wall 16 and outer wall 18 to the respective inner and outer elements recited in claim 26. The Examiner further equates support elements 32 and 36 (and gap 38) of the Bauerfeind reference to the plurality of components recited in claim 26. See Office Action at page 3.

The Bauerfeind reference relates to an inserting means for tubular instruments such as colonoscopes or gastroscopes, for example. With reference to FIGS. 1, 2 and 4-6 and column 5, line 5 - column 7, line 33, the Bauerfeind reference discloses a tubular inserting means 10 that comprises an insertion part 14. The insertion part 14 includes an inner wall 16, an outer wall 18, and an annular intermediate space 20 between the inner and outer walls 16 and 18. The inner wall 16 and the outer wall 18 are respectively connected to sleeves 26 and 28 that are tightly connected to each other, and the inner wall 16 and the outer wall 18 are tightly connected so as to seal the intermediate space 20. As shown in FIGS. 4-6, support elements 32 are evenly distributed at the outside of the inner wall 16 and support elements 36 are distributed at the inside of the outer wall 18. When a positive pressure is generated inside the intermediate space 20, the inner wall 16 deforms radially inward, while the outer wall experiences no deformation. In this configuration, the inner wall 16 is brought into close contact with a colonoscope inserted through the insertion part 14 (see FIG. 3a, for example) so that the insertion part 14 (including the inner and outer walls 16 and 18)

can move together and flexibly with the colonoscope 50. When the space 20 is evacuated, the insertion part 14 is rigidized by bringing the support elements 32 and 36 either into respective spaces 34 and 38 (FIG. 2) or into contact with each other (FIGS. 4-6). In this configuration, the colonoscope 50 is released from the inner wall 16 and can move longitudinally relative to the insertion part 14 (i.e., within the lumen circumscribed by the inner wall 16). In an additional configuration, under ambient pressure in the intermediate space 20, the support elements 32 and 36 touch each other lightly or not at all, and the insertion part 14 is in a flexible (i.e., not rigid) configuration. Nowhere throughout the disclosure of the Bauerfeind reference are the inner wall 16 and outer wall 18 described as sliding or able to slide relative to each other, either in a longitudinal or any other direction of those elements.

In citing the Bauerfeind reference against claim 26, the Examiner asserts that the components 32 and 36 have a first state in which they interfere to prevent lengthwise relative sliding of the inner and outer walls 16 and 18, and a second state in which they do not significantly interfere with lengthwise relative sliding of the inner and outer walls. See Office Action at p. 4. Applicant's arguments contrary to this assertion were set forth in the Amendment dated March 23, 2010. First, Applicant argued that "the 'inner and outer elements' may slide 'lengthwise relative to one another'". Second, Applicant argued that 'in a second state the components do not significantly interfere with' such sliding." In response, the Examiner states at page 8 of the Office Action that:

[the claimed] prevented movement may be considered to be either relative longitudinal, e.g., lengthwise movement, or radial movement. Absent any structure and/or limitations to the contrary, the Examiner notes the term 'lengthwise' may be fairly and reasonably considered to be either along the longitudinal axis or the radial axis, as both may relate to the 'length' of a portion of the device in their respective directions.

Applicant disagrees with the Examiner's rationale and assertions regarding the reasonable meaning and scope of the term "lengthwise," particularly based on the plain and customary meaning of that term and the context of the specification which supports the plain meaning. See, e.g., as-filed specification at paragraphs [0033], [0036], [0038]-[0041], and [0071]. Nevertheless, in an effort to expedite prosecution, Applicant proposes to amend claim 26 to replace the term "lengthwise" with "longitudinally" to clarify the original meaning of the use of the term lengthwise in the claims. Applicants submit that this amendment to claim 26 does not alter the scope of the previous claims, but rather clarifies the intended and plain and customary meaning of the term lengthwise, as supported by the context of the specification and claims.

The Bauerfeind reference does not disclose or otherwise suggest that the inner and outer walls 16 and 18 (shown in cross-section in the views of FISG. 2, 4, and 5) can slide longitudinally relative to one another, as required by claim 26, regardless of the interaction between the support elements 32 and 36. The Examiner points to no disclosure in the Bauerfeind reference that supports the assertion that the inner wall 16 and outer wall 18 may slide lengthwise relative to one another. Indeed, the Examiner points to no disclosure in the Bauerfeind reference that describes the inner and outer walls 16 and 18 as "sliding" relative to each other. Rather, the Bauerfeind reference discloses relative radial motion of the inner and outer walls 16 and 18, which is not a sliding motion of those components. Thus, there is no relative "sliding," longitudinally or otherwise, between the inner wall 16 and outer wall 18 disclosed or otherwise

suggested by the Bauerfeind reference, and the Examiner points to no such disclosure in that reference.

For at least the above reasons, therefore, Applicant submits that claim 26, and its dependent claims, are patentably distinguishable from the Bauerfeind reference and requests the withdrawal of the claim rejections based on Bauerfeind.

In rejecting dependent claims 28-30, the Examiner again relies on the assertion that element 14 is stiffened "by evacuating space 20 to interlock elements 16 and 18 via a radial expansion and/or contraction of support elements 32 and 36." See Office Action at pages 7- 8. However, contrary to this assertion, the Bauerfeind reference contains no disclosure whatsoever regarding the support elements 32 and 36 themselves being balloons or inflatable, or being radially expanded and/or contracted by the evacuation of space 20. It appears that in the Bauerfeind reference, the evacuation of space 20 causes a pressure differential that moves the inner wall 16 and the outer wall 18 radially relative to each other to thereby interlock the support elements 32 and 36. Consequently, the support elements 32 and 36 of the Bauerfeind reference are not disclosed as being balloons, or "energized" and "expanded radially" or "contracted radially."

Furthermore, with regard to the Section 103 rejection of claim 27, the Examiner asserts that "[i]t would have been an obvious design choice to a person of ordinary skill in the art to modify the rigidizing mechanism comprising expanding components comprising energized gas/fluid expandable components [32 and 36] as taught by Bauerfeind . . . with the electroactive polymer." See Office Action at page 4. And, in response to Applicant's arguments set forth in the Amendment dated March 23, 2010,

the Examiner asserts that since “the instant [s]pecification clearly states that the use of expansion/contraction of the plurality of components by gas and pressure is equivalent to the use of electroactive polymers because the same rigidizing effect may be obtained these are obvious structural variants.” See Office Action at page 8. As set forth in the Amendment dated March 23, 2010 and above, Applicant continues to disagree with the assertion that the support elements 32 and 36 of the Bauerfeind reference are “energized gas/fluid expandable components” in a manner consistent with Applicant’s claims, and the Examiner points to no disclosure in Bauerfeind that supports such an assertion. Nor does the Examiner point to any disclosure in the prior art to support the Examiner’s assertion that the physically tolerable, pliable plastic material (FIG. 2 embodiment) or ring- or sleeve-like support elements 32 and 36 (FIGS. 4-6 embodiment) taught by the Bauerfeind reference are equivalent materials to an electroactive polymer recited in claim 27. Accordingly, it would not have been an obvious design choice to use an electroactive polymer for support elements 32 and 36. In light of the support elements 32 and 36 not being disclosed as expandable, there would be no motivation to one having ordinary skill in the art to choose an electroactive polymer as the material for the support elements 32 and 36 without the benefit of relying on hindsight and the teachings of Applicant’s application, which is against the guidelines of the M.P.E.P. See M.P.E.P. § 2144.06(II) (“In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant’s disclosure or the mere fact that the components at issue are functional or mechanical equivalents”). The Examiner has thus provided no motivation for the proposed modification set forth in the Section 103

rejection based on Bauerfeind. For at least this reason, therefore, a *prima facie* case of obviousness of claim 27 based on Bauerfeind has not been established and the Section 103 rejection of that claim should be withdrawn.

For at least the reasons above, therefore, independent claim 26 and dependent claims 27-30 are patentably distinguishable from the Bauerfeind reference. Accordingly, Applicant requests the withdrawal of the Section 102 and 103 rejections of the claims based on the Bauerfeind reference.

Claims 27-30 depend from claim 26, and therefore are patentable for at least the same reasons as claim 26. In addition, however, at least some of the dependent claims recite unique combinations, and thus at least some of those claims are separately patentable over the art cited in the Office Action.

Based on the foregoing remarks, Applicant requests the withdrawal of all outstanding claim rejections and the timely allowance of pending claims 26-30.

The Office Action contains various characterizations and/or assertions regarding Applicant's claims and the cited art with which Applicant does not necessarily agree. Unless explicitly stated otherwise, Applicant declines to subscribe to any such characterizations and/or assertions, and silence regarding the same should not necessarily be considered acquiescence.

If the Examiner believes a phone call would assist in expediting the prosecution and allowance of this application, the Examiner is invited to telephone the undersigned at 202-292-4556.

Please grant any extensions of time required to enter this Amendment and charge any required fees to Deposit Account No. 50-3404.

AMENDMENT AFTER FINAL DATED DECEMBER 20, 2010
U.S. APPLICATION No. 10/661,159
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Respectfully submitted,

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